

ABSTRACT OF THE INVENTION

A process for the production of *ortho*-aminophenols from nitroarenes using a biocatalyst consisting of pure enzymes, partially purified enzymes, cell lysate, intact cells, or a metal reaction linked with a subsequent enzymatic reaction. The biocatalyst is an enzyme system that makes use of a nitroreductase enzyme that initially reduces the nitroarene to the hydroxylaminoarene and a mutase enzyme that converts the hydroxylaminoarene to an *ortho*-aminophenol. The biocatalyst can also consist of a coupled, two-step metal and enzyme reaction in which the metal, such as zinc, catalyzes the transformation of the nitroarene to the hydroxylaminoarene and the mutase then catalyzes the transformation of hydroxylaminoarene to the corresponding *ortho*-aminophenol.